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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,546

01/05/2007

Jinbo Bai

BJS-5006-11

9696

23117 7590 09/16/2011  
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EXAMINER

MCCRACKEN, DANIEL

ART UNIT

PAPER NUMBER

1736

MAIL DATE

DELIVERY MODE

09/16/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<b>Application No.</b> 10/587,546	<b>Applicant(s)</b> BAI ET AL.	
	<b>Examiner</b> DANIEL C. MCCracken	<b>Art Unit</b> 1736	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 07 September 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: \_\_\_\_\_.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
 13. ☐ Other: \_\_\_\_\_.

/DANIEL C MCCracken/  
Primary Examiner, Art Unit 1736

Continuation of 11. does NOT place the application in condition for allowance because:

The Examiner assumes per MPEP 405 that the response was filed by an attorney authorized to act in a representative capacity. No new power of attorney has been filed.

#### CLAIM REJECTIONS - 35 USC 112

I. With respect to the rejection of Claims 1-10 and 14-17 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, the traversal calls out certain passages as allegedly supporting the "composite reinforcement supports" language in Claim 1. (Remarks of 9/7/2011 at 5). These passages have been and are considered as follows:

(S. 4: 27-32) - this passage does not state "composite reinforcement support," or anything describing a composite. To that end, the remarks were not understood.

(S. 10: 18-22) - this passage refers to SiO powder, not a "composite reinforcement support," or anything describing a composite. To that end, the remarks were not understood.

(S. 12: 7-11) - this passage refers to nanotubes grown on nanotubes, not a "composite reinforcement support," or anything that describes a composite. To that end, the remarks were not understood.

(S. 14: 1-4) - this passage refers to nanotubes grown on SiC nanotubes, not a "composite reinforcement support," or anything that describes a composite. SiC is not a "composite" as conventionally understood in the art, i.e. a material made of two or more constituent materials that maintain separate and distinct properties. To that end, the remarks were not understood.

The rejection is MAINTAINED.

I. With respect to the rejection of Claims 1-10 and 14-17 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, the traversal is on the grounds that "the claimed feature of 'composite reinforcement supports' is clearly definite." (Remarks of 9/7/2011 at 5). This is a general allegation of patentability in violation of 37 C.F.R. 1.111(b). The language in the specification is not describing a support (i.e. the thing the nanotube is grown on) that is a composite (i.e. a material made of two or more constituent materials that maintain separate and distinct properties).

The Examiner respectfully submits that Applicants may be presenting intended use language that is inapposite, i.e. it is the nanotube that is used as a "composite reinforcement." This "concept" has some support in the specification. See (S. 5: 35 et seq.). Note that the support (i.e. the thing that the nanotube is grown on) is not a "composite," but rather is incorporated into a composite. As drafted, the claim requires a support that is a composite.

The rejection is MAINTAINED.

#### CLAIM REJECTIONS - 35 USC 103

I. With respect to the rejection of Claims 1-8 and 15 under 35 U.S.C. 103(a) as being unpatentable over Singh, et al., Towards the production of large-scale aligned carbon nanotubes, Chemical Physics Letters 2003; 372: 860-865 (hereinafter "Singh at \_\_\_") in view of (i) Ma, et al., Processing and properties of carbon nanotubes-nano-SiC ceramic, Journal of Materials Science 1998; 33: 5243-5246 (hereinafter "Ma II at \_\_\_"), and (ii) US 2003/0119920 to Wang, et al., the traversal is made en masse, lumped together with other traversals of other rejections. To the extent this was understood, the traversal is on the grounds that "The Office action impliedly admits that Singh fails to teach all the features of independent claim 1." (Remarks of 9/7/2011 at 6). This is not understood. The fact that Singh didn't teach features was why the rejection was made under 35 USC 103 versus 35 USC 102. It is not understood why this fact is being pointed out. The Remarks continue "and relies on Ma and Wang to cure this deficiency by arguing that '[s]ubstitution of these [Ma's] supports for Singh reflects substitution of known elements.'" (Remarks of 9/7/2011 at 6-7) (citations omitted). The Remarks go on to observe that Ma has no stream of inert gas and hydrogen. Ma (and Wang) was not relied on for the teaching of the gasses. It was relied on for the support. Official notice was taken with respect to this fact and was not traversed. See (Final Office Action dated 6/9/2011 at 12). This is admitted prior art. MPEP 2144.03 C. Furthermore, the arguments advanced related to whether something is inoperative or operative based on whether an inert gas is present appears to be unsubstantiated attorney argument. (Remarks of 9/7/2011 at 7). Inert gasses don't react. That is why they are "inert." This was not understood, and as noted above, no factual evidence was advanced to support this position. The remarks were understood as some manner of bodily incorporation, etc. argument, which is not the test and not the rejection given.

The rejection is MAINTAINED.

II. With respect to the rejection of Claims 1-8 and 15-16 under 35 U.S.C. 103(a) as being unpatentable over Rao, et al., Synthesis of multi-walled and single-walled nanotubes, aligned-nanotube bundles and nanorods by employing organometallic precursors, Mat Res Innovat 1998; 2: 128-141 (hereinafter "Rao at \_\_\_") in view of Ma, et al., Processing and properties of carbon nanotubes-nano-SiC ceramic, Journal of Materials Science 1998; 33: 5243-5246 (hereinafter "Ma II at \_\_\_"), this rejection does not appear to have been traversed. To the extent the paragraph on page 7 of the remarks is to be considered a traversal, the response above applies, mutatis mutandis. Inert

gasses don't react. That is why they are called inert. Adding or taking an inert away would not make the reference inoperable, and no factual evidence to that end has been advanced.

The rejection is MAINTAINED.

The following rejections were made, and to the extent the Examiner understood the remarks, were not specifically traversed:

III. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao, et al., Synthesis of multi-walled and single-walled nanotubes, aligned-nanotube bundles and nanorods by employing organometallic precursors, Mat Res Innovat 1998; 2: 128-141 as applied to claim 1 above, and further in view of US 2003/0119920 to Wang, et al.

IV. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao, et al., Synthesis of multi-walled and single-walled nanotubes, aligned-nanotube bundles and nanorods by employing organometallic precursors, Mat Res Innovat 1998; 2: 128-141 and US 2003/0119920 to Wang, et al. as applied to claim 1 above, and further in view of Choi, et al., Controlled deposition of carbon nanotubes on a patterned substrate, Surface Science 2000; 462: 195-202 (hereinafter "Choi at \_\_\_").

V. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rao, et al., Synthesis of multi-walled and single-walled nanotubes, aligned-nanotube bundles and nanorods by employing organometallic precursors, Mat Res Innovat 1998; 2: 128-141 and US 2003/0119920 to Wang, et al. as applied to claim 1 above, and further in view of Xu, et al., A method for fabricating large-area, patterned, carbon nanotube field emitters, Applied Physics Letters 1999; 74(17): 2549-2551 (hereinafter "Xu at \_\_\_").

VI. Claims 1, 5 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh, et al., Towards the production of large-scale aligned carbon nanotubes, Chemical Physics Letters 2003; 372: 860-865 in view of

(i) Ma, et al., Processing and properties of carbon nanotubes-nano-SiC ceramic, Journal of Materials Science 1998; 33: 5243-5246 (hereinafter "Ma II at \_\_\_"), and

(ii) US 2003/0119920 to Wang, et al., and further in view of:

(iii) WO 00/17102 to Smalley, et al. and Maruyama, et al., Low-temperature synthesis of high-purity single-walled carbon nanotubes from alcohol, Chemical Physics Letters 2002; 360: 229-234 (hereinafter "Maruyama at \_\_\_").

The analysis is presumed correct and no further response is needed. The rejections are MAINTAINED.